

# UTAH POWER & LIGHT COMPANY

1407 WEST NORTH TEMPLE STREET

P. O. BOX 899

SALT LAKE CITY, UTAH 84110

December 13, 1979

**RECEIVED**

DEC 14 1979

Mike Thompson  
Division of Oil, Gas, & Mining  
1588 West North Temple  
Salt Lake City, Utah 84116

DIVISION OF  
OIL, GAS & MINING

Dear Mr. Thompson:

This letter is in response to your letter dated Nov. 26, 1979. We have not responded to Mr. Bob Morgan's requests and as you are aware we now have constructed the Wilberg ponds. I called Mr. Morgan to inform him that the structure has been built. Mr. Morgan thought it may be inappropriate for a state engineer's signature at this time, but he would like the other information requested so that his file on the project is complete.

Attached to this letter is eleven copies of drawing #7704-C128. This drawing fulfills the requests of #'s 4 and 6 of Mr. Morgan's letter (dated June 5, 1979).

Also attached are soils test reports from Pittsburg Testing and these reports answer #'s 3 and 7 of same letter.

In answer to #'s 2 and 5 we placed a three foot compacted clay liner in the ponds and no "fabriform" was used. The clay liner was also compacted around the outlet pipe such that no cutoff collars were necessary.

His comment in #8 has been noted and a copy of his letter is now in our files for reference.

I am sorry that this matter was not addressed sooner and I hope that when you forward this information to Mr. Morgan he will be satisfied. The attached drawing #7704-C128 can also now be considered as an as-built drawing.

Any questions on as-built conditions can be answered by Mr. Jack Thomas at 535-4224.

Sincerely,

*Karl D. Gurr*

Karl D. Gurr  
Mining Engineer  
Mining & Exploration

attachments  
KDG:DAD:ds  
GEN:2072



# PITTSBURGH TESTING LABORATORY

2955 SOUTH WEST TEMPLE  
SALT LAKE CITY, UTAH 84115

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

SLC-3671

## REPORT

October 16, 1979

RECEIVED  
*James*  
OCT 18 1979

Utah Power and Light Company  
Attn: Mr. Jack Thomas  
Mining and Exploration Division  
P.O. Box 898  
Salt Lake City, Utah 84110

MINING AND  
EXPLORATION

Subject: Sieve Analysis Tests

Project: Sedimentation Pond, Wilberg Mine, Huntington, Utah

Results:

A. Proposed liner material obtained from Cottonwood Pit

U.S. Stand. Sieve Size	Percent Passing	
	Sample	Spec.
#4	96	100
#16	94	40-60
#50	60	20-40
#100	32	5-30
#200	19.4	5-10

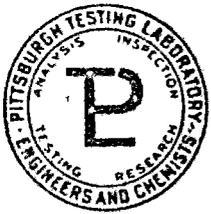
B. Filter material, backfill, obtained from Flake Pit

U.S. Stand. Sieve Size	Percent Passing	
	Sample	Spec.
1-1/2"	100	100
#4	27	70-100
#16	21	40-95
#50	15	5-62
#100	8	0-34
#200	5.0	0-5

Respectfully submitted,

PITTSBURGH TESTING LABORATORY

*Robert C. Mathews*  
Robert C. Mathews, Manager  
Salt Lake City District



# PITTSBURGH TESTING LABORATORY

2955 SOUTH WEST TEMPLE  
SALT LAKE CITY, UTAH 84115

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

SLC-3671

## REPORT August 31, 1979

**RECEIVED**  
*Logged*  
SEP 6 - 1979

Utah Power & Light  
Mining & Exploration Division  
P. O. Box 898  
Salt Lake City, Utah 84110  
Attn: Mr. Jack Thomas

MINING AND  
EXPLORATION

Project: Sedimentation Pond, Wilberg Mine, Huntington, Utah

Subject: Sieve Analysis performed on proposed liner material (obtained from Big Cottonwood pit) performed on 8/21/79

### Results:

<u>U. S. Stand Sieve Size</u>	<u>Percent Passing by Weight</u>	<u>Project Spec.</u>
#4	88	100.
#16	75	40-60
#50.	55	20-40
#100	35	5-30
#200	25.1	5-10

Respectfully submitted,  
  
PITTSBURGH TESTING LABORATORY  
*Robert C. Mathews*  
Robert C. Mathews, Manager  
Salt Lake City District

er

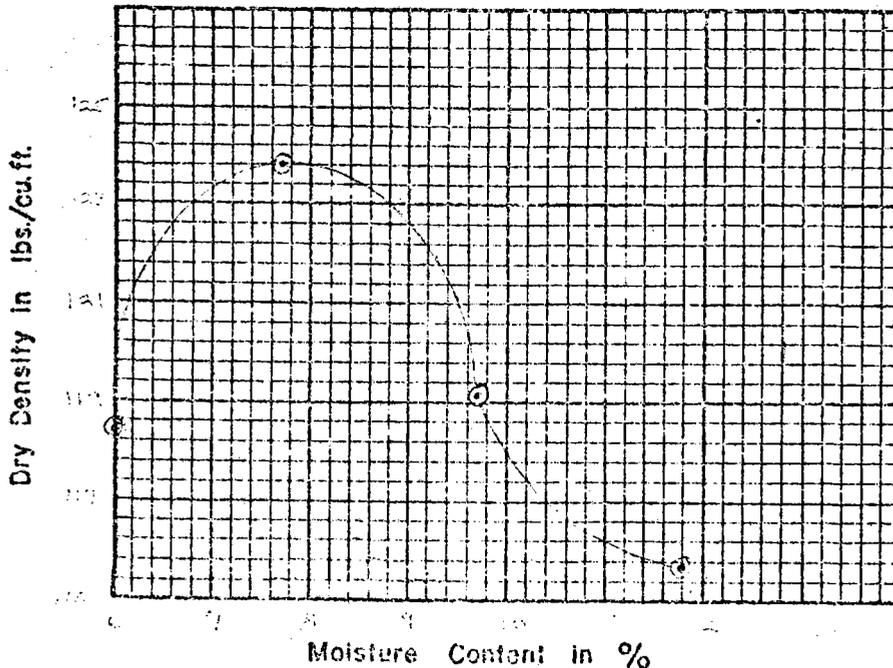
# PITTSBURGH TESTING LABORATORY

## T. 021 COMPACTION TEST

Order No. 2000 Sample No.            Client            Date             
 Project            Location            Tested by           

TRIAL	1	2 <sup>+2</sup>	3 <sup>+4</sup>	4 <sup>+6</sup>	5 <sup>-8</sup>	6
1 Wt. mold + wet soil, grams		14.64	14.89	14.21	14.76	
2 Wt. mold, grams		10.45	10.45	10.15	10.45	
3 Wt. wet soil, grams (1-2)		4.19	4.44	4.06	4.31	
4 Wet Density, lbs./cu.ft.		135.7	133.2	130.5	129.3	
5 Moisture Can No.		B	C	E	D	
6 Wt. wet sample + can, grams		4.21	4.45	4.22	4.34	
7 Wt. dry sample + can, grams		3.77	4.13	3.94	3.82	
8 Wt. moisture, grams (6-7)		.44	.32	.28	.52	
9 Wt. dry sample + can, grams		/	/	/	/	
10 Wt. can, grams		/	/	/	/	
11 Wt. dry sample, grams (9-10)		/	/	/	/	
12 % Moisture (8/11 x 100)		6.0	7.7	9.7	11.6	
13 Dry Density, lbs./cu.ft.		118.5	123.7	119.2	115.6	

NOTE: Dry Density (line 13) = (Line 4 x 100) / (100 + Line 12)



Max. Density = 133.7

Opt. Moisture = 7.7

Pittsburgh Testing Laboratory  
 1000 North 10th Street  
 Pittsburgh, Pa. 15222

Test No.             
 Date             
 By

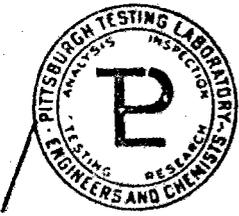












# PITTSBURGH TESTING LABORATORY

2955 SOUTH WEST TEMPLE  
SALT LAKE CITY, UTAH 84115

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

SLC-3671

## REPORT

October 16, 1979

RECEIVED  
*Jaeger*  
OCT 18 1979

MINING AND  
EXPLORATION

Utah Power and Light Company  
Attn: Mr. Jack Thomas  
Mining and Exploration Division  
P.O. Box 898  
Salt Lake City, Utah 84110

Subject: Testing at Sedimentation Pond Project, Wilberg Mine, Huntington, Utah

9-24-79: Two density tests were performed on dike #1 (2+30). Compaction of embankment and filter material is in progress. There appears to be no proctor for filter material even though concrete blocks have been poured on compacted (untested) areas. Our inspector spoke with the engineer in charge and he said he would find out where fill was stockpiled and obtain a sample so a gradation and maximum dry density could be established before proceeding with this material. A maximum dry density was established for a proposed liner material. (New gradation specifications are needed for liner material.) Embankment material on slopes do not require tests provided 6 passes are made with specified equipment.

9-25-79: Two tests were performed on dike #1 (2+30). Our inspector discovered today that filter material used for transition filter, under outlet structures, and around some corrugated steel pipe (under dike #1) had been applied, compacted, and buried. A proctor was not established for this material until today. Gradations were established for filter material and a proposed liner. The shaping of the pond is still in progress.

9-26-79: Specifications for new liner material are yet unavailable. The contractor has decided to use proposed liner material (sieve analysis #1) anyway for sealing outlet structures and to start spreading on the dike slope. Our inspector was told that Mr. Jack Thomas approved the use of both filter and liner (gradations 1 and 2). Two tests were taken on outlet structure sealed. It was decided that liner material rather than filter material would be used around C.S.P. and outlet structures to act as a sealer. Three feet of this material will be applied on top of embankment material.

9-27-79: The contractor is starting to fill with liner material. Embankment material has been compacted by making 6 passes with a large rubber tire front end loader. There has been no visible change to this material. There is some organic material in this liner but probably less than 1%. Five tests were performed in the bottom area of dike #2. Our inspector was requested to take compaction tests every 12" (2 lifts). Slope areas will be tested when enough liner is present.

9-28-79: The Wilberg Mine is on strike so the contractor is not working at this time. There seems to be a lot more coarse material in the liner than yesterday. Our inspector obtained a sample for gradation to determine whether or not material will need to be processed. A plastic index test was requested to determine the cross section of clay and silt. Our inspector is scheduled to resume testing Monday.

Respectfully submitted,

PITTSBURGH TESTING LABORATORY

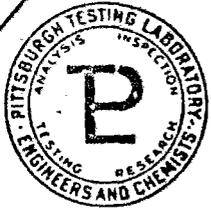
*Robert C. Mathews*

Robert C. Mathews, Manager  
Salt Lake City District

gn

**PITTSBURGH TESTING LABORATORY**

2955 SOUTH WEST TEMPLE  
SALT LAKE CITY, UTAH 84115



# PITTSBURGH TESTING LABORATORY

2955 SOUTH WEST TEMPLE  
SALT LAKE CITY, UTAH 84115

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

SLC-3671

## REPORT

November 6, 1979

Utah Power and Light Co.  
Attn: Mr. Jack Thomas  
Mining and Exploration Division  
P. O. Box 898  
Salt Lake City, Utah 84110

Subject: Field Density Tests

Project: Sedimentation Pond, Wilberg Mine, Huntington, Utah

### Results:

Test	Date	Location	Dry Density lbs/cu. ft.	Percent* Compaction	Percent Moisture
1	10/8	Bottom of pond #1 near stand pipe	112.1	92.6 (mod)	9.1
2	"	Pond #2 near stand pipe	116.6	103.4(stand) 96.4(mod)	9.0
3	10/9	Pond #1, West 2:1 slope, 8' below water level, 3 + 50	115.2	107.6(stand)	9.3
4	"	Pond #1, West 2:1 slope, 3+25	114.0	95.2	6.0
5	"	Pond #1, East 2:1 slope, 3+50	117.3	94.1	5.9
6	"	Pond #1, West 2:1 slope, 2+75	112.2	96.9	6.5
7	"	Pond #1, East 2:1 slope, 3+00	112.2	92.7	6.5
8	10/10	Pond #1, West 2:1 slope, 2+75	115.4	95.4	5.5
9	"	Pond #2, 5' west of stand pipe	113.9	94.2	8.3
10	10/11	Pond #2, 4' west of stand pipe	120.5	99.6	7.5
11	10/12	North side dike #1, 2:1 slope 2+50	110.3	91.1	9.1
12	10/15	Pond #2, 0+52, 10' west of stand pipe	113.7	94.0	7.9
13	"	Pond #2, 0+52, 8' west of stand pipe	115.1	95.1	7.7
14	"	Dike #1, North side, 2+00	109.5	90.5	7.2
15	"	Pond #2, 0+52, 10' west of stand pipe	117.4	97.0	11.0
16	"	Pond #2, 1+00, West 2:1 slope	115.3	95.3	8.0
17	10/16	Pond #2, 0+52, west 2:1 slope	118.0	97.5	11.0
18	"	Pond #2, 0 + 75, East 2:1 slope	115.2	95.2	10.1
19	"	Pond #2, 1+00, East 2:1 slope	112.2	92.7	8.2
20	"	Pond #2, 1+00, West 2:1 slope	108.4	89.6	11.2
21	10/17	Pond #2, 1+00, east 2:1 slope (retest of #19)	106.9	88.3	8.6
			111.3	92.0	8.0

<u>Test</u>	<u>Date</u>	<u>Location</u>	<u>Dry Density</u> <u>lbs/cu. ft.</u>	<u>Percent*</u> <u>Compaction</u>	<u>Percent</u> <u>Moisture</u>
22	10/17	Retest of #20	115.0	95.0	7.6
23	"	Pond #2, 0+40, East 2:1 slope	112.9	93.2	8.0
24	"	Pond #2, 0+40, west 2:1 slope	112.1	92.7	7.2
25	10/18	Pond #2, 0+50, East 2:1 slope	114.0	94.2	9.0
26	"	Pond #2, 0+40, West 2:1 slope	115.6	95.5	8.2
27	"	Dike #1 in line with stand pipe	122.2	101.0	7.0
28	"	North face dike #1, 2:1 slope	118.2	97.7	7.6
29	10/19	Pond #1, against base of stand pipe	109.0	90.1	7.0
30	"	Pond #2, against stand pipe	110.4	91.2	10.2

\*Based on a maximum dry density of 121.0 lbs/ cu. ft. (D1557)

Tests 1 & 2 were also based on a maximum dry density of 108.4 lbs/ cu. ft. (D698)

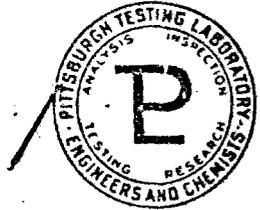
Respectfully submitted,

PITTSBURGH TESTING LABORATORY

*Robert C. Mathews*

Robert C. Mathews, Manager  
Salt Lake City District

er



# PITTSBURGH TESTING LABORATORY

2955 SOUTH WEST TEMPLE  
SALT LAKE CITY, UTAH 84115

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

SLC-3671

## REPORT

November 6, 1979

Utah Power and Light Company  
Attn: Mr. Jack Thomas  
Mining and Exploration Division  
P.O. Box 898  
Salt Lake City, Utah 84110

Subject: Testing at Sedimentation Pond Project, Wilberg Mine, Huntington, Utah

10-8-79: Our inspector arrived on the site at 1:30 PM. Two tests were performed, one each in ponds 1 and 2 near standpipe, bottom of pond. Both tests passed.

10-9-79: Fill was brought down into pond #1 and lifts were placed on the east and west 2:1 slope and were tire rolled by a front loader. Five tests were performed, 3 on the west side, 2 on the east side. All tests passed.

10-10-79: West 2:1 slope near dike #1 was formed up. A test was performed on this area with satisfactory results. Lifts were placed over the culvert leading west out of pond #2 standpipe, and compacted by a tamper. Results were satisfactory in this area.

10-11-79: The placing of fill over the culvert near pond #2 standpipe was continued. One test taken in this area showed satisfactory results. Fill was brought into the site.

10-12-79: The north side of dike #1 was formed up, giving it a 2:1 slope from the top of the dike to the base of standpipe. The bottom of pond #1 was brought to a more cross-sectional V-shape. A test was performed on the north of dike #1 with good results. Fill was hauled today.

10-15-79: Fill was placed further west along the culvert leading from standpipe in pond #2. Three tests were performed, all good, but placed with very low moisture content. The material had been compacted with a tamper. The north side of dike #1 was tire rolled and tested. Fill was brought in continuously, being placed in pond #2 on the east and west 2:1 slopes. A test taken on the west side showed satisfactory results.

10-16-79: Placement of fill continued in pond #2, east and west sides. Tests taken on each side close to the south end of pond #5 showed good results. Due to a lack of water availability, lifts placed later in the day a bit further north in pond #2 were slightly under the 90% specification for modified proctor (tests 19 and 20).

10-17-79: Retests were made on the sides of pond #2. Both tests passed. Fill was placed on dike #2 and the south end of pond #2. Two tests taken in this area passed. Rip rap was placed on the downhill side of dike #1.

10-18-79: Dike #1 was raised a few feet and a test taken on the top area. More liner material was added to the south end of pond #2. The north side of dike #1 was firmed up along the raised area. All tests were good.

10-19-79: Liner material was brought to grade compacted with a tamper around standpipes in both ponds. Pond #1 continued to be brought to a more V-shape in cross section. Boulders were removed from dike #2 area so that fill can be brought in to bring it to grade. Tests done at each standpipe were both good.

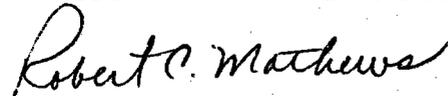
10-22-79: The area north of the sediment pond was used for inner material to build up dike #2. The road was angled up from the existing parking lot to a future mine portal and excess material was obtained in this manner. Sand was hauled up from the pit and placed on parking lot asphalt so that no damage to the surface would occur. Material today was not brought down to the sediment pond area. No tests were taken.

10-23-79: Continuation of building access road to future mine portal using talus material for building up dike #2. A small cat was brought to the sediment pond for notching the sides of pond #2. A shovel was brought in to taper back the road cut to the mine portal. Once again, soil testing was slowed by a lack of material. No tests were performed.

10-24-79: All equipment moved off the job. No further progress was made at the site. No tests were performed.

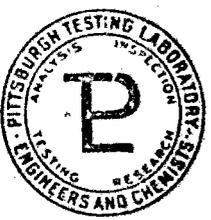
Respectfully submitted,

PITTSBURGH TESTING LABORATORY



Robert C. Mathews, Manager  
Salt Lake City District

gn



# PITTSBURGH TESTING LABORATORY

2955 SOUTH WEST TEMPLE  
SALT LAKE CITY, UTAH 84115

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

SLC-3671

**REPORT**  
August 31, 1979

**RECEIVED**  
*Logg*  
SEP 6 - 1979

Utah Power & Light  
Mining & Exploration Division  
P. O. Box 898  
Salt Lake City, Utah 84110  
Attn: Mr. Jack Thomas

**MINING AND  
EXPLORATION**

**Project:** Sedimentation Pond, Wilberg Mine, Huntington, Utah  
**Subject:** Sieve Analysis performed on Embankment material (native to area) performed on 8/21/79

<u>U. S. Stand Sieve Size</u>	<u>Percent Passing by weight</u>	<u>Project Spec.</u>
24"	100	100
10"	100	100
3"	58	20-50
#4	33	0-30
#40	22	0-25
#200	10.2	0-20

Respectfully submitted,

PITTSBURGH TESTING LABORATORY

*Robert C. Mathews*

Robert C. Mathews, Manager  
Salt Lake City District

er



# PITTSBURGH TESTING LABORATORY

2955 SOUTH WEST TEMPLE  
SALT LAKE CITY, UTAH 84115

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

SLC-3671

## REPORT

August 31, 1979

**RECEIVED**  
*Proposed*  
SEP 6 - 1979

Utah Power & Light  
Mining & Exploration Division  
P. O. Box 898  
Salt Lake city, Utah 84110  
Attn: Mr. Jack Thomas

MINING AND  
EXPLORATION

Project: Sedimentation Pond, Wilberg Mine, Huntington, Utah

Subject: Sieve analysis performed on 8/22/79

U.S. Stand Sieve Size	-----Percent passing by weight-----			Project Spec.
	Big Cottonwood Pit	Flake Pit, Stock #1 Proposed Filer Material	Flake Pit, Stock #2	
1 1/2"	100	100	100	100
#4	1	18	17	70-100
#16	1	16	14	40-95
#50	1	14	12	5-62
#100	1	10	8	0-34
#200	.6	7.2	5.5	0-5

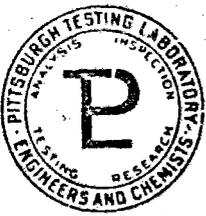
Respectfully submitted,

PITTSBURGH TESTING LABORATORY

*Robert C. Mathews*

Robert C. Mathews, Manager  
Salt Lake City District

er



# PITTSBURGH TESTING LABORATORY

FORM

2955 SOUTH WEST TEMPLE  
SALT LAKE CITY, UTAH 84115

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL

SLC-3671

## REPORT OF MOISTURE-DENSITY RELATIONSHIP TEST

August 31, 1979

RECEIVED

SEP 8 - 1979

MINING AND  
EXPLORATION

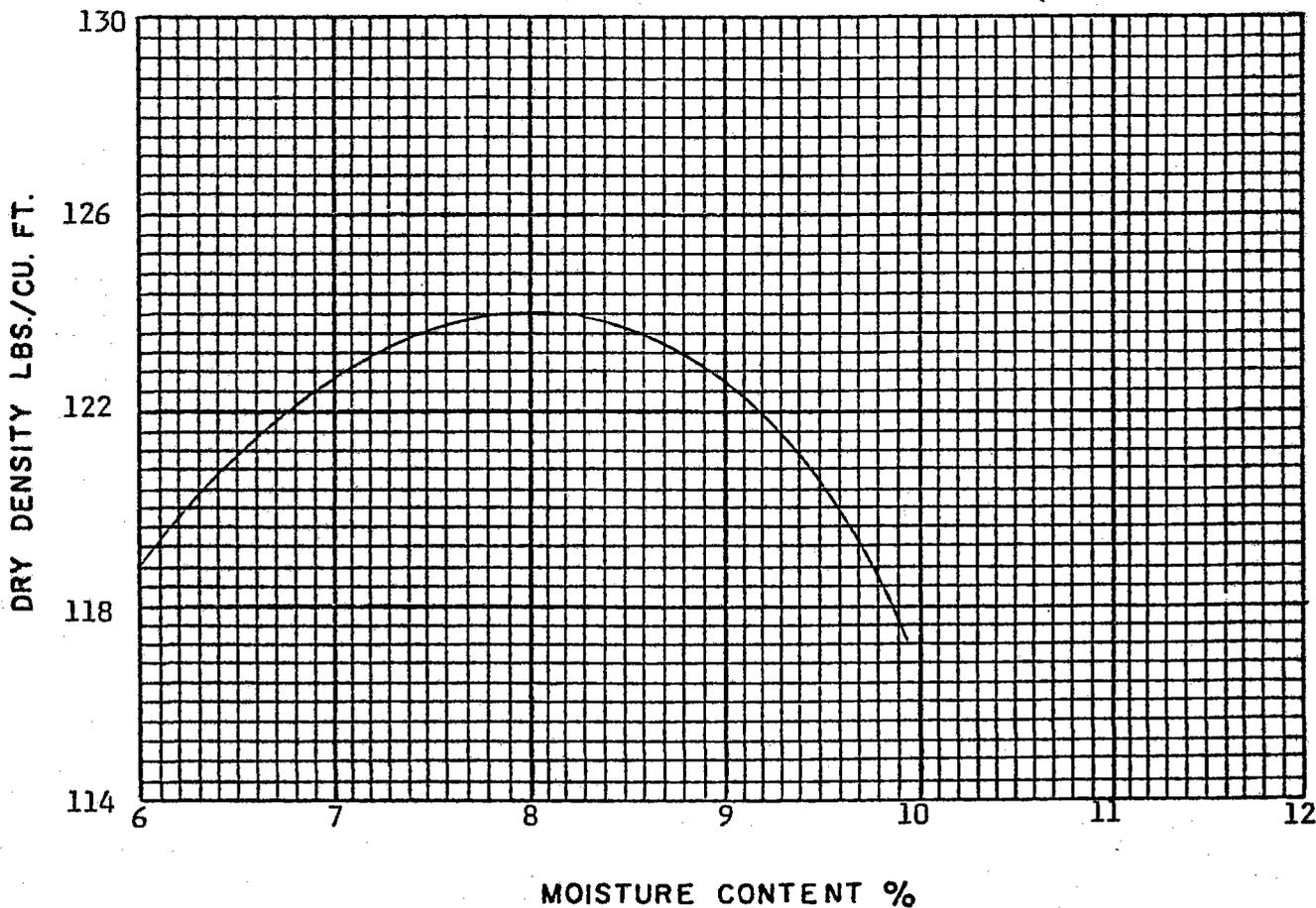
For: Utah Power & Light Co.- Mining & Exploration Division

Project: Wilberg Mine

Location: Sedimentation Pond

Sample: Dark Brown Sandy Silt with coarse gravel and some coal

METHOD OF TEST: AASHTO T 99

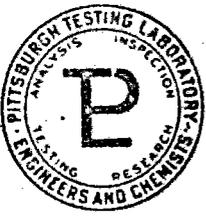


Optimum Moisture 8.1 % Max. Dry Density 124.0 lbs./cu. ft.

RESPECTFULLY SUBMITTED,  
PITTSBURGH TESTING LABORATORY

*Robert C. Mathews*

DISTRICT MANAGER



# PITTSBURGH TESTING LABORATORY

2955 SOUTH WEST TEMPLE  
SALT LAKE CITY, UTAH 84115

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

SLC-3671

## REPORT

August 31, 1979

**RECEIVED**  
*Logged*  
SEP 6 - 1979

Utah Power & Light  
Mining & Exploration Division  
P. O. Box 898  
Salt Lake City, Utah 84110  
Attn: Mr. Jack Thomas

MINING AND  
EXPLORATION

Project: Sedimentation Pond, Wilberg Mine, Huntington, Utah

Subject: Sieve Analysis performed on proposed liner material (obtained from Big Cottonwood pit) performed on 8/21/79

### Results:

<u>U. S. Stand Sieve Size</u>	<u>Percent Passing by Weight</u>	<u>Project Spec.</u>
#4	88	100.
#16	75	40-60
#50	55	20-40
#100	35	5-30
#200	25.1	5-10

Respectfully submitted,

PITTSBURGH TESTING LABORATORY

*Robert C. Mathews*

Robert C. Mathews, Manager  
Salt Lake City District

er